TEXAS INSTRUMENTS

Via Electronic Filing

September 5, 2024

Marlene H. Dortch, Esq.
Secretary
Federal Communications Commission
45 L Street, NE
Washington, DC 20554

Re: *Wireless Telecommunications Bureau and Office of Engineering and Technology Seek Comment on NextNav Petition for Rulemaking,* WT Docket No. 24-240; RM-11989

Dear Marlene Dortch:

Texas Instruments Incorporated (TI) strongly opposes NextNav's petition to reconfigure the 902-928 MHz band and to adopt new rules for its use. NextNav's proposed overhaul of the band puts at risk hundreds of millions of devices that today support critical deployments in grid infrastructure, building security, building climate control systems, and industrial transportation. At the same time, the proposed actions would undercut future deployments and innovations in this well-utilized bandwidth.

TI designs, manufactures, tests, and sells semiconductors that support nearly 100,000 customers worldwide in the industrial, automotive, personal electronics, communications, and enterprise system industries. TI continually strives to build innovative technologies that are reliable, efficient, and affordable. TI carries a substantial portfolio of wireless technology solutions operating in the 902-928 MHz band and continues to invest and innovate to support the market needs. These products have been deployed in energy infrastructure, building automation, retail automation, industrial transport, asset tracking, smart cities, and smart agriculture, where reliable and energy-efficient communication is crucial. The 902-928 MHz band currently provides an ideal ecosystem in which such low-power, low-interference, and long-range systems flourish.

902-928 MHz products support electric, water, and gas utility infrastructure systems for distribution, metering, and monitoring. The current system for reliable operation of the electric grid is based on communication in the 902-928 MHz band. These utility infrastructure systems have been designed for an extended service life of up to 20 years, and the NextNav petition would cause substantial negative impact to millions of installed devices.

902-928 MHz products also enable millions of in-home systems that Americans rely on every day. These systems offer improved energy efficiency by utilizing remote room sensors to optimize heating and cooling. Additionally, 902-928 MHz connectivity supports window and door intrusion sensors for robust in-home security systems.

Current industrial transportation and agriculture monitoring systems also use the 902-928 MHz band. Asset tracking enables safe and reliable transportation of perishable goods such as food and medication. The asset tracking and cold chain monitoring applications rely on 902-928 MHz band for long-range, low-power communications. Agriculture monitoring systems use the 902-928 MHz band for reliable operation to enable efficient use of resources improving yield and sustainability.

The proposals that NextNav has asked the FCC to adopt put all of these critical infrastructure and consumer uses at great risk. The businesses, governments, and individuals who rely on TI's wireless products, as well as those of countless other device manufacturers, have invested heavily in these deployments in reliance upon interference protection rules that the FCC has long had in place, including protection from high-power uses and bright line rules for compliant use.

TI opposes the opening of this band to new, high-power users. NextNav proposes that the FCC adopt a new band plan that would afford NextNav the ability to sub-license or lease valuable spectrum rights to full power commercial wireless providers. Cellular operators often utilize up to 200 watts of transmit power, easily overpowering FCC § 15.247 and FCC § 15.249 compliant communication devices. Likewise, TI opposes NextNav's proposed removal of the field-testing requirements for interference with Part 15 devices by LMS in FCC § 90.353(d).

Additionally, TI opposes NextNav's proposal to remove "safe harbor" provisions from FCC § 90.361. As the FCC noted in its 2006 Notice of Proposed Rule Making on this topic, in docket 06-49, "[e]limination of the safe harbor provision could come at great cost to Part 15 manufacturers and systems that have made investments in developing and deploying equipment within the safe harbor provision." TI and its customers rely on this protection to ensure investments developing, producing, and installing Part 15 systems like those described above are not wasted. NextNav's proposed changes to the band would not only disrupt current deployments, but would upend a thriving technology ecosystem in which businesses continue to innovate.

The impacts of the proposed changes on TI, our customers, our business partners, and others designing, manufacturing, selling, and using Part 15 devices are not readily mitigated. The NextNav petition creates substantial risk for reliable operation of hundreds of millions of products that have been deployed in the 902-928 MHz band. Many of these products have extended service lives of up to 20 years, and the cost of moving them all to a different band would be devastating to several industries. Hardware and software limitations make many of these products incapable of moving to a new band. Relocation would, in many cases, require entirely new devices to be built and deployed, leading to an enormous waste of resources and cost.

Texas Instruments appreciates this opportunity to provide comments and requests that the Commission deny NextNav's petition for rulemaking.

Sincerely,

Marian Kost
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